

## CLAIMS

What is claimed is:

1. A method for communicating with a mobile device comprising emulating the mobile device on a wide area cellular wireless network using a fixed radio terminal
2. A method for handing off a communication session with a mobile terminal between a local network and a wide area wireless network comprising:
  - switching the communication session between a communication path passing from the wide area wireless network through a fixed radio terminal and over the local network to the mobile terminal; and
  - establishing a communication path passing from a device on the local network to the mobile terminal not passing through fixed radio terminal
3. An apparatus comprising:
  - a local network, including a network access point for coupling a mobile device to the local network and a fixed radio terminal including an antenna for communicating on a wide area cellular network;
  - a radio transceiver coupled to the radio antenna; and
  - a network interface for communicating over the local network.
4. A method of deploying a gateway as an interface between a local area network and multiple wide area cellular wireless networks that use different technologies simultaneously, the method comprising:
  - the gateway tuning multiple radios to different cellular networks.
5. A fast handoff scheme that does not require the mobile device to register in the wide area cellular wireless network as it moves from the local area network into the wide area cellular wireless network in which the mobile device inherits the call parameters of the proxy device, which is the gateway, and switches its radio to the new network without experiencing interruption in the call connection.

6. A method that permits migration to VoIP without the need for deploying expensive VoIP switching infrastructure, comprising implementing the TDM-to-VoIP conversion in the gateway.
7. A flexible method of routing calls originating within an enterprise, comprising:
  - forwarding the calls to the PSTN via the PBX;
  - forwarding the calls to the cellular wireless network via the Cellular Proxy; and
  - forwarding the calls to the Internet or a private IP network via the enterprise router using a virtual private network (VPN).
8. A call control method in which the call is translated by the gateway, which is referred to here as the Cellular Proxy, from a mobile device operating on a cellular network and a fixed wired telephone or user terminal connected to the PBX as a PBX phone or via the LAN as a VoIP phone.
9. A call control method in which an outbound or inbound call enters or leaves the user organization premises from the PSTN via a PBX or wireline carrier's Centrex service, or as a VoIP call via an private internet connection between two sites, as a VPN connection between sites over the public Internet, or as a VoIP call to a public Internet or carrier's VoIP service.